BY ORDER OF THE COMMANDER
436TH AIRLIFT WING

DOVER AIR FORCE BASE
INSTRUCTION 21-107

18 SEPTEMBER 2014

Maintenance

AIRFIELD TOOL CONTROL PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Dover Air Force Base Instruction (DOVERAFBI) 21-107, *Airfield Tool Control Program*. This instruction implements Air Force Policy Directive (AFPD) 21-1, *Air and Space Maintenance*, and fulfills the requirements of Air Force Instruction (AFI) 21-101, *Aircraft and Equipment Maintenance Management*, 26 July 2010, Paragraph 3.4.1.66., develop a Wing instruction to control tools, equipment and electronic devices from all Wing agencies dispatching to aircraft parking/runway/taxi areas and aircraft maintenance areas in accordance with (IAW) Chapter 1, Chapter 10 and Chapter 14. This instruction directs units to follow procedures that employ the basic principles of the Composite Tool Kit (CTK) concept. It provides information required by AFI 21-101 and gives additional guidance to ensure positive control of assets and common hand tools to enhance the Foreign Object Damage (FOD) Control Program. References: AFI 21-101, AFI 21-101, AMCSUP I, AMCI 24-101, Vol 5, and TO 00-20-1, *Aerospace Equipment Maintenance, Policies and Procedures*, 15 June 2011. This applies to all units assigned to the 436th/512th Airlift Wing. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional's chain of command.

1. Purpose: This instruction provides positive tool control and accountability procedures and is an integral part of the FOD Prevention Program. Adhering to this instruction aids in reducing FOD to aircraft, engines, aircrew training devices, and support equipment; furthermore, it helps in maintaining safe and reliable tools for employee use. To be in compliance with this instruction, units must establish a program which meets the intent of positive tool and equipment accountability and control. Units will use this instruction in conjunction with existing written guidance.

2. Definitions:

2.1. Aircraft Maintenance Facilities: Includes 436 MXG buildings 500, 613, 706, 711, 712, 713, 714, 715, 716, 719, 721, 722, 723, 725, 792, 793, 794, 945, and 1272 (hangars and industrial areas only).

2.2. Airfield: Includes all areas of the installation involved in aircraft operation such as taxiways, parking ramps, hardstands and the runway.

2.3. Electronic Device: Portable items such as land mobile radios (LMR), cell phones, laptop computers, etc.

2.4. Equipment: A device required to accomplish a task or carry out work such as surveyor's transit, portable generator, etc.

2.5. Flight line: The flight line includes all aircraft parking spots, taxiways, aprons and runways.

2.6. Tool: A hand-held instrument used in accomplishing work such as a hammer, saw, wrench, drill, level, shovel, axe, rag, etc.

3. Responsibilities:

3.1. Tool control is the responsibility of all personnel within the Wing. Commanders and supervisors at all levels will ensure compliance with this instruction.

3.2. Unit commanders will:

3.2.1. Ensure an effective program is in place and compliant with this instruction for those sections that perform duties on the airfield or in aircraft maintenance facilities.

3.2.2. Ensure that contractors, depot teams and contract field teams (CFT) performing any maintenance on the airfield or in aircraft maintenance facilities are accountable for their own tools and follow guidelines in this instruction.

3.3. Flight Chiefs/Section NCOICs (or equivalent) will:

3.3.1. Appoint CTK custodians.

3.3.2. Ensure tool rooms are secured and afford protective measures such as monitoring or controlled access.

3.3.3. Determine what tools, equipment, and electronic devices fall under the scope of this instruction.

3.3.4. Ensure personnel authorized to procure tools are limited to those appointed (i.e. government purchase card holder, CTK custodian). This appointment and authorization

will be in writing for the purpose of financial accountability and coordinated through the unit's Resource Advisor.

3.3.5. Develop a system of inventory and control.

3.3.5.1. Units are encouraged to use TCMax or other MAF approved tool control software to conduct and document inventories for all tools and equipment. For those sections using manual tracking, tools/equipment will contain a Master Inventory List (MIL), and a locally developed Missing/Removed Tool Log.

3.3.5.1.1. MILs will list the complete inventory of the kit and, if applicable, location of tool/item. All items attached/fastened to a tool box by lanyard will be annotated on the MIL (e.g. locks, FOD pouches, MIL pouches) as a line item with the intent of accountability. Toolboxes, trays, shadowing foam and MILs need not be annotated on the MIL.

3.4. CTK Custodians will:

3.4.1. At a minimum, conduct and document 90-day inventories for all items utilized on the airfield or within maintenance facilities (sealed kits are exempt until the seal is broken) unless alternate methods for inspection and inventories have been approved in writing by the owning Sq CC not to exceed 180 day intervals. Complete inventories will be accomplished and documented annually, and when the primary CTK custodian changes.

3.4.2. Ensure all tools are marked and readily identifiable by squadron and shop CTK identifiers.

3.4.2.1. World Wide Identification Designators (WWID) and CTK identifiers are developed by owning units and approved for use by 436MXG/QA. Units will use only the approved designators in **Attachment 2**. Designators not approved by QA or not listed in **Attachment 2** are not authorized.

3.4.3. Ensure spare and consumable tools are controlled at all times and inventoried to prevent fraud, waste, and abuse by locking them in a secure place and keeping them separated from issued tools.

3.4.4. Expendable tools such as apex bits and consumable tools such as safety wire spools, along with HAZMAT items, will be accounted for and will be turned in to the CTK custodian for proper disposal, with the exception of tooling with self-contained oil/hazmats. All CTKs that have HAZMAT materials will have appropriate Safety Data Sheets (SDS) available in the workcenter.

3.4.5. Secure and track all broken tools in a controlled, lockable area, until they are processed for disposal. Contents must match the tracking log. Ensure that all etchings are completely removed from broken non-repairable tools prior to removing them from the CTK for disposal. CTK custodians will document all removed/broken CTK items on the MIL and in the applicable tool control software.

3.4.6. At no time will the same person sign out and sign in their own CTK(s) or equipment. **NOTE:** Self-service electronic tool cabinets that verify accountability of each tool do not fall under this requirement. In sections with minimal personnel or a

single person on shift, utilize the squadron production superintendent or neighboring section supervisor to conduct turn-in inventories.

3.5. Users will:

3.5.1. Perform a visual inventory of all tools and equipment when issued for use, at the completion of a job or task, and when returned to the tool storage area.

3.5.2. Ensure only individual equipment items purchased by the unit are used in work centers and on the flightline.

3.5.3. Identify individual equipment Items (e.g., ear defenders, reflective belts, etc.) with minimum first initial, last name, and last four of the individuals social security number (SSN). The individual's employee number may be used in lieu of the last four of the individual's SSN.

4. Rags/Absorbent Material Control:

4.1. Rags will be issued in sets or otherwise be individually accounted for when issued, at the completion of each task, before leaving the work site, and at turn-in. Each work center will determine their issue size based on usage and workload. Rags will be accounted for at the end of each shift by CTK personnel. All rags not accounted for will be treated as a lost tool and will be reported. Cheesecloth is considered a rag; however, paper products/paper towels are not considered rags. Rags should be uniform in size and color.

4.2. Absorbent material, once used in the workplace, will be disposed of properly in accordance with all applicable regulations, instructions, and standards.

5. Lost Tool Procedures:

5.1. Report lost or missing tool/equipment items, within the airfield or aircraft maintenance facilities to the Maintenance Operations Center (MOC)/Air Transportation Operations Center (ATOC) at 677-5436 immediately. Use the Lost Tool Report, **Attachment 3**. Agencies outside of the MXG should immediately contact the Command Post at 677-4201.

5.2. If a tool/item is lost on, or believed to be lost on an aircraft, notify the Flight Line Production Superintendent/Duty Officer and MOC/ATOC immediately. MOC/ATOC will notify 436 MXG/QA. Agencies outside of the MXG should immediately contact the Command Post. After an initial search of the work area (not to exceed one hour or at the discretion of squadron supervision) a Lost Tool Report will be initiated. The MOC/ATOC will issue a Red X job control number on the aircraft involved.

5.3. If an item/tool is discovered missing after an aircraft has blocked, initiate the normal lost tool procedures. Notify MOC/Command Post and the appropriate production superintendent immediately. MOC will notify the aircraft commander/ next station of arrival, as well as 436/512 MXG/CC and Command Post.

5.4. The person who issued the item/tool will initiate a Lost Tool Report through the affected CTK Support Section. All 436 MXG reports will be maintained electronically in the MXG Lost Tool Database on the shared drive G:\436AW\436MXG\QualityAssurance\Group Lost Tools.

5.4.1. 436 MXG Lost Tool Reports will be posted to the database no later than the end of the effected duty shift to ensure all pertinent information is gathered and reported.

5.4.2. In the event of a database failure, use the Lost Tool Report as an interim report. When utilizing the alternate form, fill in all required information and forward the report to MXG/QA (Fax # 5609) and squadron CTK monitor. The squadron CTK monitor will input the report into the MXG Lost Tool Database and reference the assigned control number once the database is recovered.

5.5. If an item/tool is lost and no aircraft are involved, notify the Production Superintendent/Duty Officer/Command Post or equivalent immediately. After an initial search of the immediate work area (not to exceed one hour or at the discretion of squadron supervision) a Lost Tool Report will be initiated and forwarded to the 436 MXG/QA office within 24 hours.

5.6. Aircrew will account for all tools and equipment dispatched to the flight line (e.g., flashlights, knives, etc.). If an aircrew member discovers a tool missing and it cannot be located after an initial search, the aircrew member will enter a Red X in the AFTO Form 781A with a description of the tool and a specific last known location, and notify the Production Superintendent to enter the item into the MXG Lost Tool Database. Additionally, an AMC 97, *AMC In-Flight Emergency and Unusual Occurrence Worksheet*, will be submitted to Flight Safety.

5.7. If an Aircrew Flight Equipment member discovers a tool missing and it cannot be located after an initial search, the person who lost the tool will notify the Production Superintendent and Aircrew Flight Equipment supervision immediately.

5.8. Any time a tool is found, contact the Production Superintendent/Duty Officer or equivalent with the type of tool, etching number, and location where the tool was found. 436 MXG personnel will contact MXQA. QA will update the database status for that item (when applicable). The tool can then be returned to the work center or tool room it was issued from.

6. Warranted Tool Program:

6.1. CTK custodians will manage warranty tools and equipment in the same manner as other tools. All tools under warranty will be replaced with another warranted tool using the GPC process. CTK custodians will establish controls to ensure damaged/unserviceable tools are de-etched, secured and accounted for until processed by the vendor.

7. 436th Maintenance Group:

7.1. Tool Control: TCMax will be used as the primary means for accountability, tracking and control of tools and equipment stored and issued. AF Form 1297, *Temporary Issue Receipt,* may be used in addition to TCMax for increased accountability or as a TCMax backup.

7.2. Only the Pro-Super or Expediter will authorize on-site turnover of tools. When tool kits must be exchanged between mechanics at the job site, the inventory shall be accomplished prior to turning the kit over to the next person with both parties present. Upon completing the inventory, the person being relieved will hand carry the AF IMT 1297 (Temporary Issue Receipt) to the CTK monitor to transfer accountability of the tools or equipment in TCMax.

7.3. 436 MXG/QA will coordinate on all procedures for locally manufactured tools for aircraft use not authorized in specific technical data. Procedures are defined in MXGOI 21-20, *Local Manufacture.*

7.4. Crash Damaged or Disabled Aircraft Recovery (CDDAR): All CDDAR equipment will be stored in Hangar 714, the Aero Repair Shop (Maintenance Squadron). Aero repair personnel are responsible for the maintenance and timely inspection of all CDDAR equipment and equipment trailers.

7.4.1. CDDAR trailer/vehicle and items similar to those normally stored in a CTK (i.e. tools/test equipment) will be annotated IAW AFI 21-101, AMCSUP I, and will be tracked utilizing TCMax or other approved MAF tool control software. Additionally, maintenance and inspection actions will be tracked through MIS G081 system, AFTO Form 95, and AFTO Form 244, as required. All equipment will be readily accessible and kept serviceable at all times.

7.5. Point of Use (POU) Trailer:

7.5.1. To provide timely access to composite tool kits, the following policy will be implemented to ensure accountability, management and oversight of CTK section Maxi Kits and POU trailers on the flight line. Maxi Kits will be permanently located in each maintenance POU trailer. Each trailer will maintain separate maxi-kit binders and a binder listing for the trailer's overall contents.

7.5.2. The owning CTK section is charged with the maintenance and correction of CTK discrepancies. The CTK section will also inspect and recertify the POU trailer and Maxi-Kits every 30 days. During this inspection, tools will be inspected individually to ensure "tool mixing" between kits does not occur. In the event of a lost tool or item, follow established procedures.

7.5.3. The CTK representative will sign out required POU trailer and Maxi-kit toolbox, in TCMax, to the individual assuming custodial responsibility. A complete and thorough inventory will be conducted at this time by the individual. All discrepancies will be identified at this time prior to assuming responsibility of the trailer, Maxi-kit toolbox and contents. The Shift Chief or Dock Chief will inform the technician(s) of POU location.

7.5.4. At shift turnover, a thorough kit inventory will be conducted by the team leader/technician of the off-going shift with the designated team leader/technician of the oncoming shift. When all equipment is accounted for, the on-coming team leader/technician will sign the kit in for the off-going team leader/technician on the Inventory and Control Log book.

8. Other Agencies.

8.1. Depot teams, factory representatives, contract field teams, and other agencies that work on aircraft or unit equipment will follow guidance listed in this instruction. MXG/QA representatives will brief the agencies on proper procedures for tool and equipment control prior to work starting and will monitor throughout for compliance.

9. Multiple Work Centers and/or Multiple Support .

9.1. Work centers are limited to a single tool room where tools and tool kits will be issued and controlled from a single location in a work center. Non-aircraft maintenance work centers without a specific dedicated tool room space will utilize available space as required with tool storage and organization designed to facilitate control and accountability centralized within existing facility space.

10. Decentralized Locations.

10.1. Units may wish to store oversized CTKs or equipment outside of a designated tool room when size makes it impractical to store within. In these situations, all other requirements (e.g., control, use, accountability, etc.) are identical. The CTK custodian must ensure all program requirements meet the intent of AFI 21-101 (and applicable MAJCOM supplements) and this instruction.

RICHARD G. MOORE, JR., Col, USAF
Commander, 436th Airlift Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 21-101, *Aerospace Equipment Maintenance Management,* 26 July 2010

AFI 21-101, AMC SUP I, *Aerospace Equipment Maintenance Management,* 14 February 2011

AMCI 24-101, Vol 5, *Air Transportation Readiness and Resources,* 10 January 2013

TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation Policies and Procedures,* 15 June 2013

Prescribed Forms

No forms prescribed by this publication.

Adopted Forms

AF 847, *Recommendation for Change of Publication*

AFTO 781A, *Maintenance Discrepancy and Work Document*

Abbreviations and Acronyms

AFTO—Air Force Technical Order

ATOC—Air Transportation Operations Center

CDDAR—Crashed, Damaged, or Disabled Aircraft Recovery

CFT—Contract Field Team

CTK—Consolidated Tool Kit

FOD—Foreign Object Damage

HAZMAT—Hazardous Material

IAW—In Accordance With

LMR—Land Mobile Radio

MAF—Mobility Air Force

MIL—Master Inventory Listing

MOC—Maintenance Operations Center

MXG—Maintenance Group

NCOIC—Non-Commissioned Officer in Charge

PMEL—Precision Measurement Equipment Laboratory

QA—Quality Assurance

SSN—Social Security Number

TCMAX—Tool Control Max

WWID—World Wide Identification Designator

Attachment 2

IDENTIFICATION DESIGNATORS

Aircraft Maintenance Squadron (AMXS)

Bldg.	Workcenter	WWID
500	Transient Alert	DMAT
792	AMES Section	DMAA
793	436/512 AMXS CTK	DMAM
794	736/712 AMXS CTK	DMCM

Maintenance Squadron (MXS)

613	Jet Engine Test Cell	DMMT
711	Isochronal/Backline Isochronal	DMMD
711	Isochronal Jet Shop	DMMM
712	Elect/Environmental Shop	DMME
712	Hydraulic Shop	DMMH
714	Aero Repair Shop	DMMR
714	CDDAR	DMMC
714	Non-Destructive Inspection	DMMN
714	Wheel/Tire Shop	DMMQ
715/945	Fuel Cell Repair	DMMF
719	Jet Engine Accessory Shop	DMMP
721	Metals Tech Shop	DMMO
721	Structures Shop	DMMS/U/Y
722	Avionics Shop	DMMA/B
725	Jet Engine Repair	DMMX/V/W
779	AGE Production Control	DMMI/J/K/L
1272	AMMO	DMMZ

Maintenance Group/Maintenance Operations Squadron/Field Training Detachment/Wash Contractor

200	Field Training Detachment	DMDT
704	Quality Training Program	DMQT
706	Aircraft Cleaning Contractor	DMSD
713	Quality Assurance	DMQA

Aerial Port Squadron

203	Air Terminal Operations Center	DMPT
503/150	Fleet/Passenger Terminal	DMPF
550	Ramp	DMPR
550	Special Handling	DMPS

550	ATSEV	DMPA
550	Load Planning	DMPL

Operations Group

209	Aircrew Flight Equipment	DMLS
	3rd Airlift Squadron	DMOT
	9th Airlift Squadron	DMON
	326th Airlift Squadron	DMOS
	709th Airlift Squadron	DMOR

Mission Support Group

	Civil Engineering Squadron	DMSC
	Logistics Readiness Squadron	436LRS
	Fire Department	DMSF

Attachment 3

LOST TOOL REPORT

UNIT: _____ DATE: _____

1. ITEM LOST:	
2. CTK ID NUMBER:	
3. AIRCRAFT TAIL NUMBER/LOCATION:	
4. WORKCENTER:	
5. SECTION/SHIFT CHIEF:	
6. INDIVIDUAL ITEM WAS CHECKED OUT TO:	
7. LOSS NOTED BY:	
8. LOCATION WHEN NOTED:	
9. LAST KNOWN LOCATION OF ITEM:	
10. WORK PERFORMED:	
11. PRO-SUPER NOTIFIED:	TIME:
12. MOC NOTIFIED:	TIME:
13. ASSIGNED JOB CONTROL NUMBER:	
14. WHAT, WHEN, HOW ITEM WAS LOST:	
15. AREAS SEARCHED:	
SIGNED:	

FORWARD COMPLETED REPORT TO 436 MXG/QA (Fax #5609) AND SQUADRON CTK SECTION